

A table is included for the use of anyone who desires to make a scale rather than to reproduce the one presented here; the tabular values are the abscissae of the geostrophic wind scale in miles.

Speed	Ordi-nates	Latitude				
		20°	30°	40°	50°	60°
M. p. h.	Miles					
10	60	788	540	420	352	312
15	90	524	360	280	234	192
20	120	394	270	210	176	150
30	180	262	180	140	117	104
40	240	197	135	105	88	78
50	300	158	108	84	70	62
60	360	131	90	70	59	52

JEAN LUGEON. *Tables Crépusculaires*. Warsaw, 1934.

An important factor in many phenomena of the high atmosphere is the illumination of the air at upper levels by solar radiation. As an aid in the study of these phe-

nomena this volume of tables has been prepared. The tables give the vertical height above the surface of the earth of the lower limit of the illuminated region for different latitudes of the observer and different declinations and hour angles of the sun. This quantity is the distance from the surface of the earth to the point where the perpendicular to the surface is intersected by the solar rays that are just grazing the earth below the horizon. These tables cover 438 large pages. Incidentally, the times of sunrise and sunset can also be obtained from the data presented in the volume.

The tables have been computed from an accurate formula, in which the flattening of the earth and the azimuth of the sun have been taken into account. Refraction, however, has not been included, because it was thought preferable to give only definite geometric data, and not attempt to include such variable and uncertain physical factors as refraction. In a 38-page introduction, the formulae that were used are derived in detail.—
Edgar W. Woolard.

BIBLIOGRAPHY

[RICHMOND T. ZOCH, in Charge of Library]

By AMY D. PUTNAM

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Arctic institute.

Transactions:

- v. 16. Scholz, J. Luftelektrische Messungen auf Franz-Josefs-Land während des II internationalen Polarjahres 1932-33. Leningrad. 1935. 169 p.
- v. 34. Hydrology and meteorology. Scientific results of the expedition on the icebreaker "Malyguin" to Franz-Joseph Land 1932. Leningrad. 1935. 52 p.
- v. 46. Geophysics. Riasanceva, Z. A. Materials for the climatology of the Polar regions of the USSR. Part 1. The climate of Dickson Island. Leningrad. 1936.
- v. 55. Geophysics. Materials for the climatology of the Polar regions of the U. S. S. R. Part 2. Severnaya Zemlya. Leningrad. 1936. 83 p.

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Zur Morphologie geophysikalischer Zeitfunktionen. Berlin. 1935. 21 p. 26 cm. (Sonderausgabe aus den Sitzungsberichten der Preussischen Akademie der Wissenschaften, Phys.-Math. Klasse. 1935. XXX.)

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An advanced course in general college physics. New York. 1936. xv, 340 p. illus., diagrs. 22½ cm.

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De nauwkeurigheid van microklimatologische waarnemingen. Batavia. [1935.] p. [206]-213. illus., tables. 24½ cm. [At head of title: Overdruk uit het Verslag van de 15e vergadering van de Vereeniging van proefstation-personeel te Batavia, October 1935, pagina 206-213.]

Vooruitzichten van een dagelijksche weervoorspelling in Ned.-Indië. Batavia. [1935.] p. [15]-43. tables, figs. 24½ cm. [At head of title: Overdruk uit het Verslag van de 15e vergadering van de Vereeniging van proefstation-personeel te Batavia, October 1935, pagina 15-43.]

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SOLAR OBSERVATIONS

CORRECTIONS TO TRANSMISSION COEFFICIENTS OF SCHOTT-GLASS FILTERS

By HERBERT H. KIMBALL, Research Assistant, Harvard University

The transmission of the glass filters used in connection with determinations of atmospheric turbidity and water-vapor content have been a problem of considerable importance. Both Fuessner and Ångström warned that different samples of these screens would probably have different transmission coefficients, principally because of the fact that they do not all cut off the spectrum at exactly the same wave length.

Investigations in the United States, especially by the National Bureau of Standards, led to the conclusion that a temperature correction should be applied to the transmission coefficients. In the heading of table 3 the corrections for the transmissions of the screens are always followed by +C. The transmissions that have been used for different temperatures of the screens are given in the first column of the following table; and new determinations for each screen are given in the second column. The new values were determined from very excellent curves obtained by the Colorimetry Section, National Bureau of Standards, with a recording spectrophotometer; it is hoped the National Bureau of Standards will publish these curves.

The determination of the new temperature coefficients was not completed in time to determine the turbidities and water-vapor contents of the atmosphere from the radiation measurements obtained at Blue Hill during March 1937. In their determination from the old transmissions, a persistent difference in the results from the two screens appeared, that required an investigation. These data, as determined by means of the new transmission factors, will be published in the April REVIEW.

Transmission coefficients of Schott-glass screens at different temperatures

Temper- ature °C.	Transmission		
	OG ₁	RG ₂	
+15	0.852	0.890	0.841
20	.851	.889	.840
25	.850	.888	.839
30	.849	.887	.838
35	.848	.886	.837
40	.847	.885	.836

SOLAR RADIATION OBSERVATIONS DURING MARCH 1937

By IRVING F. HAND, Assistant in Solar Radiation Investigations

For a description of instruments employed and their exposures, the reader is referred to the January 1935 REVIEW, page 24.

Table 1 shows that solar radiation intensities averaged above normal for March at all four stations.

Table 2 shows a deficiency in the amount of total solar and sky radiation received on a horizontal surface at Lincoln, Fresno, Twin Falls, Miami, and Riverside. All other stations received more than normal radiation during the month.

Table 3 shows comparatively low values of water-vapor on the 4 days during which turbidity measurements were made.

Polarization observations taken at Washington on 6 days give a mean of 56 percent with a maximum of 62 percent on the 17th. Both of these values are close to the corresponding normals for the month. No polarization measurements were made at Madison during March.